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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,256	11/26/2003	Henrik Icking	10808/115	6057
48581	7590	06/26/2006	EXAMINER	
BRINKS HOFER GILSON & LIONE			TAN, VIBOL	
INFINEON			ART UNIT	
PO BOX 10395			PAPER NUMBER	
CHICAGO, IL 60610			2819	

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/723,256

Applicant(s)

ICKING ET AL.

Examiner

Vibol Tan

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 6-9, 11-14 and 16-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki (U. S. PAT. 4,264,872).

In claim 1, Suzuki teaches all claimed features in Fig. 2, a method for outputting a digital signal, the method comprising the steps of: supplying a driver stage (Fig. 2) with a current via a positive (via resistor 14) and a negative current (via resistor 13) supply connection; limiting the current to a current limit value (a predetermined value) via a positive and/or negative current supply connection (14 and 13 are limiting resistors); and temporarily (increasing the current flowing when  $\Phi 1$  is high causes transistor 20 to conduct, thus connects one end of capacitor 18 to the output terminal) increasing the current flowing via an output (OUT) of the driver stage in synchronization with the edges of at least one trigger signal (/IN) of the driver stage, wherein the increased current is provided via a capacitor (18) to increase the output current of the driver stage.

In claim 2, Suzuki further teaches the method of claim 1, further comprising a step of the driver stage supplying a differential output signal at two output lines (OUT,

/OUT) wherein at least one of the two output lines receives the increase signal (via capacitor 18).

In claims 3 and 4, Suzuki further teaches the method of claim 1, wherein the step of providing the increase signal (amplifying signal) comprises providing an increase signal generated (the amplified signal) with a time delay (a time delay as a result of capacitance of 18 or 17 times load resistance) to the corresponding edge of the at least one trigger signal (/ IN or IN) of the driver stage; and wherein the step of providing the increase signal comprises providing the increase signal generated by an inverting (left side of Fig. 2) or a non-inverting driver (right side of Fig. 2) which receives a control signal at its input (/ IN or IN).

In claim 6, Suzuki further teaches the method of claim 1, wherein the step of increasing the current via the capacitor (18 or 17) comprises providing a current having a voltage increase (boosting) which is greater than the voltage increase of the output signal of the driver stage (inherent).

In claim 7, Suzuki further teaches the method of claim 1, wherein the step of supplying the driver stage with the current comprises providing a constant current (15).

In claim 8, Suzuki further teaches the method of claim 1, further comprising a step of the driver stage supplying a differential output signal at two output lines (/ OUT, OUT) wherein the current flowing via the positive supply connection (via 14) and the current flowing via the negative current supply connection (via 13) are controlled such that the mean value of the voltages of the two output lines assumes a controlled constant value (15).

In claim 9, Suzuki further teaches the method of claim 1, wherein the step of supplying the driver stage with a current (inherent) comprises supplying the driver stage with current from a controllable current source (19) via the positive and/or negative current supply connection (via 13) and at least one controllable current source (19) receives an increased current via a capacitor (17).

Claims 11-14 and 16-19 correspond to detailed circuitry already discussed similarly with regard to claims 1-4 and 6-9.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki.

In claim 5, Suzuki teaches all claimed features of claim 1; with the exception of teaching wherein the step of increasing the current comprises increasing the current via a capacitor having a variable capacitance. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to select a capacitor having a variable capacitance, since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ 284 (CCPA 1954).

Therefore; it would have been obvious to one ordinary skill in the art at the time of the invention was made to select a capacitor having a variable capacitance to replace the capacitor of Suzuki, in order to easily adjust to a desirable value of capacitance for the device, when necessary, without having to replace the capacitor.

Claim 15 is rejected for the same reasoning as claim 5.

5. Claims 3-10 and 13-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed 5/15/2006 have been fully considered but they are not persuasive.

The applicant argued that the present invention as defined by independent claims 1 and 11 differs significantly from the apparatus of Suzuki. However, the Applicant did not point out the specific distinctions between the applied reference of Suzuki and the rejected claims; the Applicant mainly discussed over the prior art of Suzuki, but did not discuss nor refer to the Applicant's own specification or to the drawings to specifically to point out the distinctions.

In column 4, line 3-14 of Suzuki, Suzuki talks about selecting the attenuation rate or ratios of capacitors, and the ratios of the capacitors clearly can be seen in column 4, line 17, which are not the input signals being attenuated, as characterized by the Applicant.

The Examiner would also like to point out that the capacitors 17 and 18 of Suzuki are connected to the outputs when  $\Phi 1$  is at logic high causes transistors 19 and 20 to conduct; which increase the current flowing via the outputs (OUT, /OUT).

The rejection of claims 1-20 is maintained, as set forth above.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vibol Tan whose telephone number is (571) 272-1811. The examiner can normally be reached on Monday-Friday (7:00 AM-4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**VIBOL TAN**  
**PRIMARY EXAMINER**